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CORRECTION
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Corrigendum: Implementing the Soil Enrichment Protocol at Scale: Opportunities for an Agricultural Carbon Market

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A Corrigendum on

Implementing the Soil Enrichment Protocol at Scale: Opportunities for an Agricultural Carbon Market

by Jackson Hammond, A. A., Motew, M., Brummitt, C. D., DuBuisson, M. L., Pinjuv, G., Harburg, D. V., Campbell, E. E., Kumar A. A. (2021). Front. Clim. 3:686440. doi: 10.3389/fclim.2021.686440

In the original article, there was an error. The original text read "The SEP allows for inorganic carbon amendments such as biochar to enhance carbon sequestration, provided that the carbon remains in the project area." The SEP does allow for biochar as an organic amendment since it impacts organic carbon. However, because biochar contains both organic and inorganic carbon, this sentence may cause undue confusion.

A correction has been made to the section "*New Technologies and Research Coupled With Carbon Credits Can Accelerate The Implementation of Regenerative Agriculture At The Global Scale,* subsection *Research and Methodology Updates Could Improve Accounting for All Potential Soil Carbon Gains and Losses,* paragraph 1.

Corrected Paragraph: Further research is critical to elucidate how key practices and crop systems impact GHG emissions and soil carbon sequestration. Recognizing this, Indigo has undertaken a long-term research effort, the Soil Carbon Experiment, described in the Supplementary Material. External research has also illustrated how methodologies and biogeochemical models could be improved to better account for carbon enrichment or loss in diverse soils. The methods described in this article and in the SEP primarily focus on organic carbon flux. The SEP allows for use of amendments such as biochar, which includes a component of inorganic carbon, to enhance carbon sequestration provided that the carbon remains in the project area. Properly quantifying and verifying the inorganic carbon stocks, however, is challenging as it is not currently estimated by biogeochemical models. Similarly, soil erosion is an important factor to accurately estimate the benefit of practices such as no-till and cover cropping (Asefaw Berhe et al., 2018). Although some models like EPIC and RZWQM2 account for erosion, many do not. Updating models and methods to better account for these sources and losses of carbon could further

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incentivize adoption of regenerative practices. Recent research has also highlighted ways that soils could be used to capture carbon through enhanced rock weathering, in which the soil-captured carbon eventually travels through waterways and deposits on the ocean floor (Beerling et al., 2020). This type of sequestration has benefits in terms of greater certainty of permanence but would require a new methodology or significant revision to the SEP as the ultimate location of the carbon goes outside the bounds of the fields within a project.

The authors apologize for this error and state that this does not change the scientific conclusions of the article in any way. The original article has been updated.

REFERENCES

Asefaw Berhe, A., Barnes, R. T., Six, J., and Marín-Spiotta, E. (2018). Role of soil erosion in biogeochemical cycling of essential elements: carbon, nitrogen, and phosphorus. *Annu. Rev.* 46, 521–548. doi: 10.1146/annurev-earth-082517-010018

Beerling, D. J., Kantzas, E. P., Lomas, M. R., Wade, P., Eufraiso, R. M., Renforth, P., et al. (2020). Potential for large-scale CO_2 removal via enhanced rock weathering with croplands. *Nature* 583, 242–248. doi: 10.1038/s41586-020-2448-9.